SONY

FM Stereo
FM-AM Receiver

Operating instructions EN

R·D·S EON

STR-DE515
STR-DE415
STR-DE315

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WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

Do not install the appliance in a confined space, such as a bookcase or build-in cabinet.

Precautions

On safety

- Should any solid object or liquid fall into the cabinet, unplug the receiver and have it checked by qualified personnel before operating it any further.

On power sources

- Before operating the receiver, check that the operating voltage is identical with your local power supply. The operating voltage is indicated on the nameplate at the rear of the receiver.
- The unit is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the unit itself has been turned off.
- If you are not going to use the receiver for a long time, be sure to disconnect the receiver from the wall outlet. To disconnect the mains lead, grasp the plug itself; never pull the cord.
- AC power cord must be changed only at the qualified service shop.
- The mains switch is located on the front exterior.

On placement

- Place the receiver in a location with adequate ventilation to prevent heat build-up and prolong the life of the receiver.
- Do not place the receiver near heat sources, or in a place subject to direct sunlight, excessive dust or mechanical shock.
- Do not place anything on top of the cabinet that might block the ventilation holes and cause malfunctions.

On operation

- Before connecting other components, be sure to turn off and unplug the receiver.

On cleaning

- Clean the cabinet, panel and controls with a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

If you have any question or problem concerning your receiver, please consult your nearest Sony dealer.

About This Manual

The instructions in this manual are for models STR-DE515/DE415 and STR-DE315. Check your model number by looking at the upper right corner of the front panel. In this manual, the STR-DE515 is the model used for illustration purposes. Any difference in operation is clearly indicated in the text, for example, "STR-DE515 only".

Type of differences

Feature \ Model	DE515	DE415	DE315
MIX AUDIO OUT		•	
WOOFER	•		
5.1/DVD	•		
WIRELESS REAR SPEAKER	•		
RM – P301	•	•	
RM – U301			•

Conventions

The instructions in this manual describe the controls on the receiver. You can also use the controls on the remote if they have the same or similar names as those on the receiver.

- A "Quick Reference Guide" is supplied on page 26.
- The "Remote Button Descriptions" section on page 25 provides an overview of the remote buttons.
- The following icons are used in this manual:

Indicates that you can use only the remote to do the task.

Indicates hints and tips for making the task easier.

This receiver has the Dolby Surround system.
Manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY", "PRO LOGIC" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

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EN

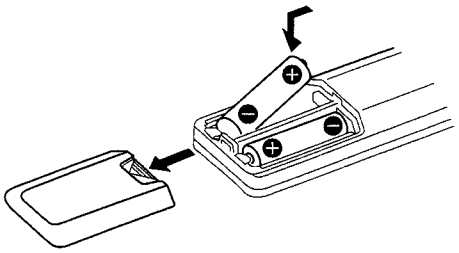
Unpacking

Check that you received the following items with the receiver:

- FM wire aerial (1)
- AM loop aerial (1)
- Remote controller (remote) (1)
- Size AA (R6) batteries (2)
- Scart adaptor (1)

Inserting batteries into the remote

Insert two size AA (R6) batteries in accordance with the + and – markings on the battery compartment. When using the remote, point it at the remote sensor ▣ on the receiver.



When to replace batteries

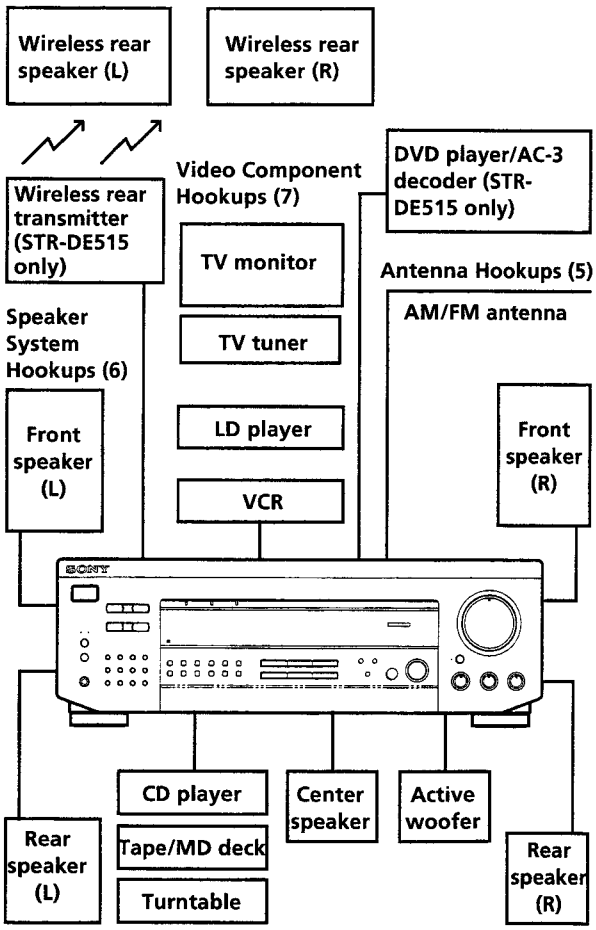
Under normal use, the batteries should last for about 6 months. When the remote no longer operates the receiver, replace both batteries with new ones.

Notes

- Do not leave the remote in an extremely hot or humid place.
- Do not use a new battery with an old one.
- Do not expose the remote sensor to direct sunlight or lighting apparatuses. Doing so may cause a malfunction.
- If you don't use the remote for an extended period of time, remove the batteries to avoid possible damage from battery leakage and corrosion.

Hookup Overview

The receiver allows you to connect and control the following audio/video components. Follow the hookup procedures for the components that you want to connect to the receiver on the pages specified. To learn the locations and names of each jack, see "Rear Panel Descriptions" on page 24.



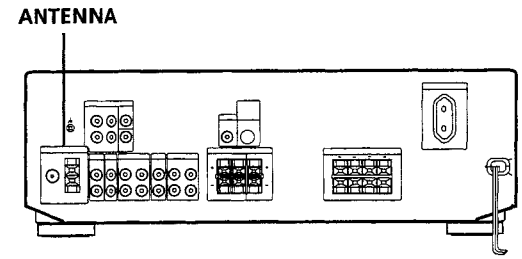
Before you get started

- Turn off the power to all components before making any connections.
- Do not connect the mains lead until all of the connections are completed.
- Be sure to make connections firmly to avoid hum and noise.
- When connecting an audio/video cable, be sure to match the color-coded pins to the appropriate jacks on the components: Yellow (video) to Yellow; White (left, audio) to White; and Red (right, audio) to Red.

Aerial Hookups

Overview

This section describes how to connect AM and FM aerials to the receiver. If you want to receive radio broadcasts with the receiver, complete these connections first, then go to the following pages. For specific locations of the terminals, see the illustration below.

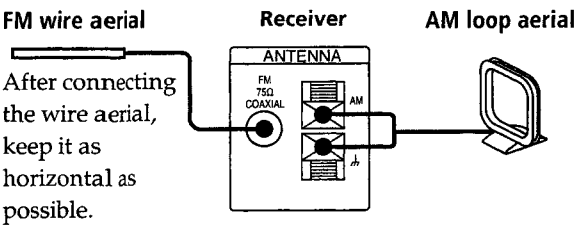


What aerials will I need?

- FM wire aerial (supplied) (1)

- AM loop aerial (supplied) (1)

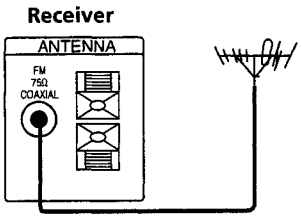
Hookups



After connecting the wire aerial, keep it as horizontal as possible.

If you have poor FM reception

Connect one end of a 75-ohm coaxial cable (not supplied) to an FM outdoor aerial and connect the other end to the FM 75Ω COAXIAL terminal on the back of this unit.

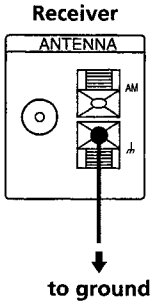


If you have poor AM reception

Connect a 6 to 15-meter (20 to 50 ft.) insulated wire (not supplied) to the AM aerial terminal in addition to the AM loop aerial. Try to extend the wire outdoors and keep it horizontal.

Connecting a ground wire

To prevent hum, connect a ground wire (not supplied) to the ⏚ ground terminal. If you've connected an outdoor aerial, be sure to connect the ground for lightning protection.



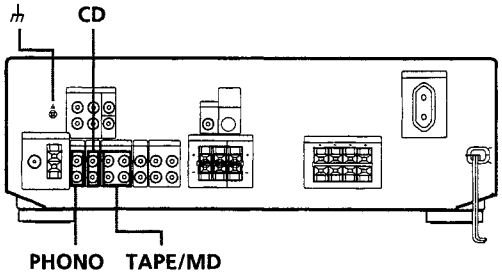
Where do I go next?

If you want to connect other components, go on to the next section. If you're only planning to use the receiver to listen to the radio, go to "Speaker System Hookups" on pages 6 and 7.

Audio Component Hookups

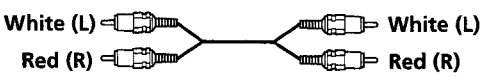
Overview

This section describes how to connect your audio components to the receiver. If you want to use the receiver as an amplifier, complete these connections. For specific locations of the jacks, see the illustration below.



What cords will I need?

Audio cords (not supplied) (1 for each CD player or turntable; 2 for each tape deck or MD deck)

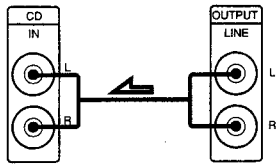


(continued)

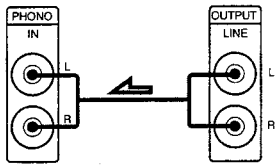
Hookups

The arrow ⟹ indicates signal flow.

CD player **Receiver** **CD player**



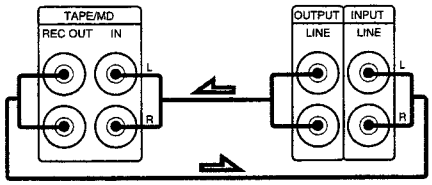
Turntable **Receiver** **Turntable**



- **If your turntable has an earth lead**
  To prevent hum, connect the earth lead to the ⏚ ground terminal on the receiver.

Tape deck or MD deck

Receiver **Tape deck or MD deck**



Where do I go next?

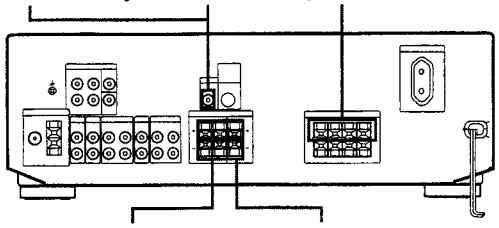
Go on to the next section to connect the speakers.

Speaker System Hookups

Overview

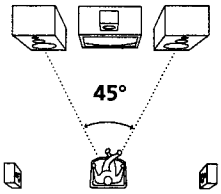
This section describes how to connect your speakers to the receiver. Although front (left and right) speakers are required, centre and rear speakers are optional. Adding centre and rear speakers will enhance the surround effects. Connecting an active woofer will increase bass response (for STR-DE515 only).
For specific locations of the terminals, see the illustration below.

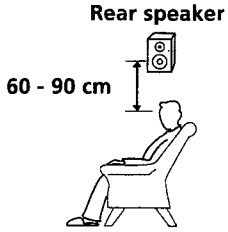
WOOFER (STR-DE515 only) **MIX AUDIO OUT (STR-DE415 only)** **FRONT SPEAKERS A**



SURROUND SPEAKERS REAR **SURROUND SPEAKER CENTER**

For optimum surround sound effect, place your speakers as shown below.





What cords will I need?

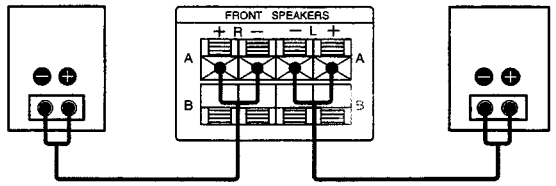
Speaker cord (not supplied) (1 for each speaker)

Twist the stripped ends of the cord about 15 mm (2/3 inch). Be sure to match the speaker cord to the appropriate terminal on the components: + to + and – to –. If the cords are reversed, the sound will be distorted and will lack bass.

Hookups

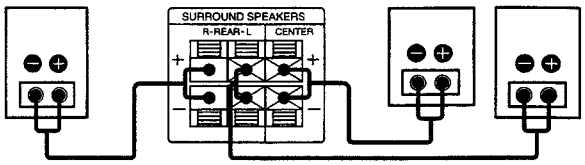
Front speakers

Front speaker (R) **Receiver** **Front speaker (L)**



Rear and centre speakers

Rear speaker (R) **Receiver** **Centre speaker** **Rear speaker (L)**



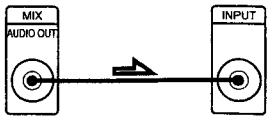
Note (except STR-DE515)

Be sure to connect the both rear speakers (L and R). No sound is heard if only one speaker is connected.

Active woofer (STR-DE515/DE415 only)

STR-DE515 **Receiver** **Active woofer**

STR-DE415 **Receiver** **Active woofer**



Wireless rear Speaker (STR-DE515 only)

- When using an optional Sony Wireless Speaker System, connect the trsnsmitter to the WIRELESS REAR SPEAKER connector.

Note

- Do not connect any other component.
- Wireless rear speaker does not function under stereo mode, DOLBY (3 CH LOGIC) and C. STUDIO A / B (3 CH LOGIC) mode.

Selecting the speaker system

To drive the speakers, select the speaker system as follows:

To drive	Depress SPEAKERS button
Speaker system A (connected to the FRONT SPEAKERS A terminals)	A
Speaker system B (connected to the FRONT SPEAKERS B terminals)	B
Both speaker systems A and B (series connection)	A+B

Notes

- If you want to enjoy the surround sound, be sure to connect the front speakers to the FRONT SPEAKERS A terminal.
- No sound is heard when you press SPEAKERS A+B without connecting speaker system B.

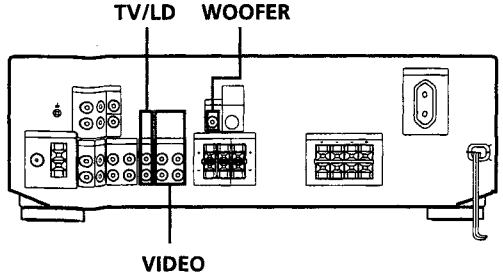
Where do I go next?

To complete your system, go to "AC Hookups" on page 8. If you want to connect video components to enjoy surround sound when watching/listening to TV programmes or video tapes, go on to the next section.

Video Component Hookups

Overview

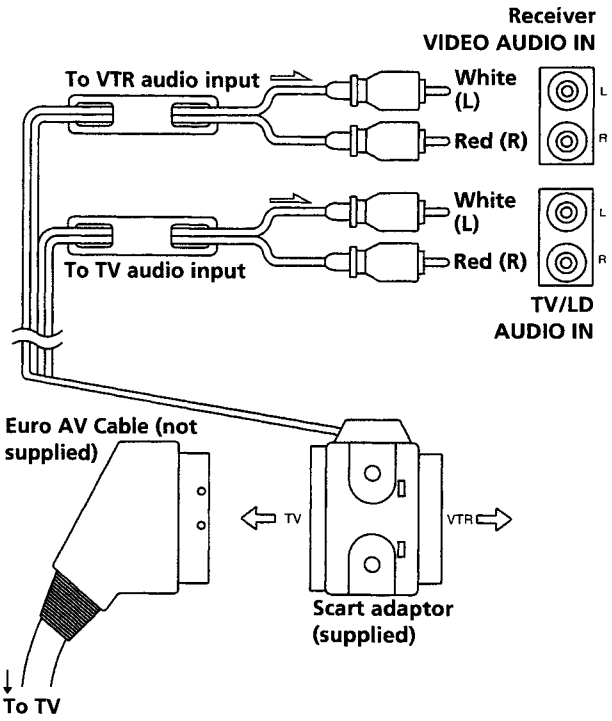
This section describes how to connect video components to the receiver. For specific locations of the jacks, see the illustration below.



Hookups

The arrow ⇨ indicates signal flow.

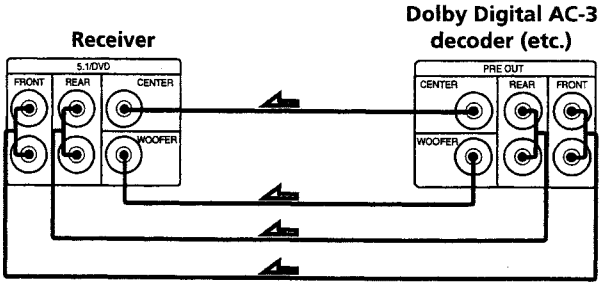
You can listen to the sound from VCR or TV/LD by connecting the audio signal from VCR or TV/LD to the receiver.



Use the function buttons (TV/LD, CD, TAPE/MD etc) to select the VIDEO AUDIO OUT signal. You can record this audio signal by connecting a recording component such as a cassette deck (to the VIDEO AUDIO OUT jack).

DVD player/AC-3 decoder (STR-DE515 only)

You can play decoded Dolby Digital AC-3 soundtracks through the speakers connected to the amplifier.
If you have a Dolby Digital AC-3 decoder you can amplify a decoded Dolby Digital AC-3 soundtrack with the following connections.



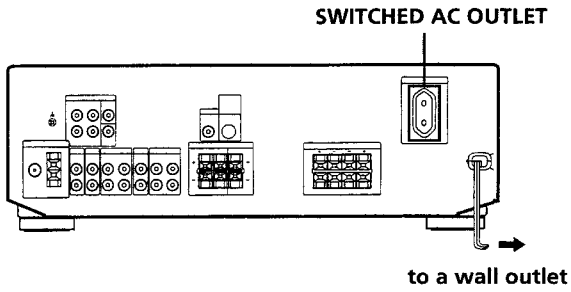
Where do I go next?

Go on to the next section to connect the mains lead and complete your home theatre system.

AC Hookups

Connecting the mains lead

Connect the mains lead from this receiver and from your audio/video components to a wall outlet.
If you connect other audio components to the SWITCHED AC OUTLET on the receiver (except for the U.K. model), the receiver can supply power to the connected components so you can turn on/off the whole system when you turn on/off the receiver.



Caution
Make sure that the power consumption of the component connected to the receiver's AC outlet does not exceed 100 watts. Do not connect high-wattage electrical home appliances such as electric irons, fans, or TVs to this outlet.

Where do I go next?

Before you use the receiver, go to the next section to make sure that all the controls are set to the appropriate positions.

Before You Use Your Receiver

Before you start using your receiver, make sure that you have:

- Turned MASTER VOLUME to the leftmost position (0).
- Selected the appropriate speaker system. (See "Selecting the speaker system" on page 7.)
- Set BALANCE to the centre position.

Storing FM Stations Automatically in Alphabetical Order ("Auto-betical")

With "Auto-betical select" you can automatically store up to 30 FM and FM RDS stations in alphabetical order without redundancy. Additionally, "Auto-betical select" only stores the stations with the clearest signals. If you want to store FM or AM (MW) stations one by one, see "Presetting Radio Stations" on page 13.
FM RDS stations are stored first, in alphabetical order by their Station Name, followed by regular FM stations in order of frequency. (For more details on RDS, see page 14.)

1 Press POWER to turn off the receiver.

2 Hold down MEMORY and press POWER to turn the receiver on.
"AUTOBETICAL SELECT" appears and the receiver scans and stores all the FM and FM RDS stations in the broadcast area.
"FINISH" appears when the receiver has finished storing the FM and FM RDS stations.

To stop Auto-betical before storing all the stations
Press POWER to turn the receiver off.

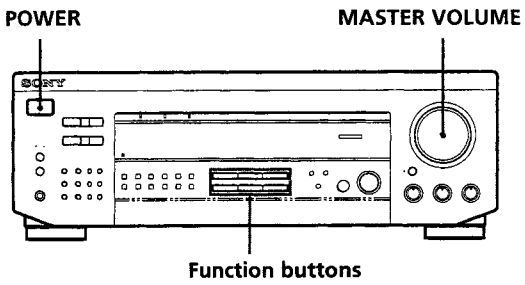
Notes

- Stations currently stored in the preset memory are shifted to the rear (toward C0) and may be erased, depending on the number of stations received by Auto-betical select.
- If you move the aerial after storing stations using Auto-betical select, the stored settings may no longer be valid. If this happens, store the stations again.
- If you move to another area, repeat this procedure to store stations in your new area.

Selecting a Component

To listen to or watch a connected component, first select the function on the receiver or with the remote. Before you begin, make sure you have:

- Connected all components securely and correctly as indicated on pages 5 to 8.
- Turned MASTER VOLUME to the leftmost position (0) to avoid damaging your speakers.



1 Press POWER to turn on the receiver.

2 Press a function button to select the component you want to use:

To listen to or watch	Press
Records	PHONO
Radio programmes	TUNER
Compact discs (CD)	CD
Audio tapes or MiniDiscs (MD)	TAPE/MD
TV programmes or Laser discs	TV/LD
Video tapes	VIDEO
DVD player/AC-3 decoder	5.1/DVD (STR-DE515 only)

3 Turn on the component, for example, a CD player, and then start playing.
To tune in radio stations on this receiver, see "Receiving Broadcasts" on page 12.

4 Turn MASTER VOLUME to adjust the volume.
To adjust the volume of the TV's speakers, use the volume control on the TV.

To	Do this
Mute the sound	Press MUTING on the remote. Press again to restore the sound
Reinforce the bass	Press BASS BOOST to turn on the BASS BOOST indicator.
Adjust the balance	Turn the BALANCE control left or right.
Adjust the tone quality	Adjust the BASS and TREBLE controls.

When you listen with headphones
Connect the headphones to the PHONES jack and set the SPEAKERS buttons to OFF.

5.1/DVD mode (STR-DE515 only)
When you are listening to 5.1/DVD mode, BASS, TREBLE, BASE BOOST and SURROUND do not function.

Watching/listening to video programmes

When you watch/listening to TV or video programmes, we recommend you play audio portion through the receiver instead of your TV's speaker. This lets you take advantage of the receiver's surround sound effects, like Dolby Pro Logic Surround and lets you use the receiver's remote to control the audio. Turn off the speakers on your TV before you start so you can enjoy the surround sound from your receiver.

To watch/listening to TV programmes, turn on the TV, TV tuner and the receiver and press TV/LD on the receiver.

To watch videos or laser discs, do the following:

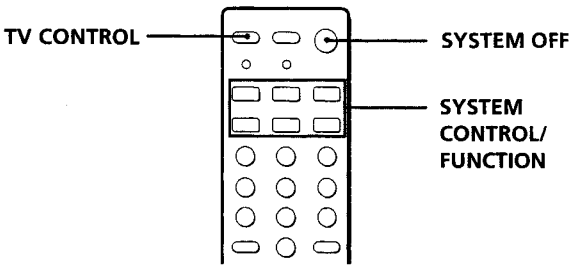
1 Press a function button to select the component (for example, VIDEO).

2 Turn on the TV and set the TV's video input to match your video component.

3 Turn on the component (VCR or LD player), and start playback.

Using the remote

The remote lets you operate the receiver and the Sony components that are connected to it.



(continued)

1 Press one of the SYSTEM CONTROL/FUNCTION buttons to select the component you want to use. The SYSTEM CONTROL/FUNCTION buttons on the remote are factory-set as follows:

To listen to	Press
Records	PHONO
Radio programmes	TUNER
Compact discs (CD)	CD
Audio tapes or MiniDiscs (MD)	TAPE/MD (INITIAL-TAPE B MODE)
TV programmes	TV
VHS Video tapes (VTR-3 mode)	VIDEO
DVD player/ AC-3 decoder	CD and PHONO

If you want to change the factory setting of a button, see page 11.
The receiver and the selected component turn on.

If the component does not turn on
Press the power switch on the component.

2 Start playing.
Refer to "Remote Button Descriptions" on page 25 for details.

To turn off the components
Press SYSTEM OFF. You can turn off the video and audio components connected to the SWITCHED AC OUTLET at the same time.

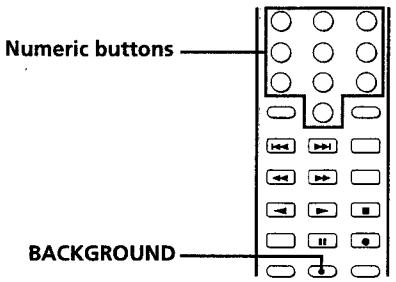
If you use a Sony TV
When you press TV to watch a TV programme, the TV turns on and switches to the TV input. The TV also turns on when you press VIDEO and switches to the appropriate video input.
If the TV does not switch to the appropriate input automatically, press TV/VIDEO.

When you watch TV without using the receiver (only for Sony TVs)
Press TV CONTROL to set the remote to operate only the TV. When you press this button, the TV turns on and switches to the TV input. If the TV does not switch to the TV input automatically, press TV/VIDEO.

Note
Some Sony TVs can not be controlled by this remote.

Operating one component while using another (Background Operation)

You can temporality operate other components while listening to or watching a programme.



1 Hold down BACKGROUND.

2 Press both the corresponding numeric button of the component you're going to use (see the table below) and one of the following buttons at the same time; VISUAL POWER, TV/VIDEO, CH PRESET +/–, ANT TV/VTR, D.SKIP, ►, ◄, ■, ◄◄/►►, I◄◄ /►►I, II, ●.

Example: To start recording on a tape deck while listening to a CD
While holding down BACKGROUND, press 4 (or 5) and press ● at the same time.

The numeric buttons are assigned to select the functions as follows:

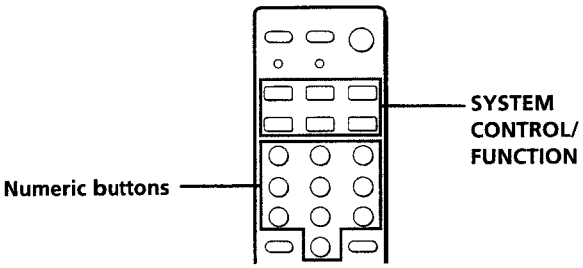
Numeric button	Operates
1	CD player
2	DAT deck
3	MD deck
4	Tape deck A
5	Tape deck B
6	LD player
7	VCR (remote control mode VTR 1*)
8	VCR (remote control mode VTR 2*)
9	VCR (remote control mode VTR 3*)
0	TV
ENTER	DVD

* Sony VCRs are operated with a VTR 1, 2 or 3 setting. These correspond to Beta, 8mm and VHS respectively.

Changing the factory setting of a function button

If the factory settings of the FUNCTION buttons (page 10) don't match your system components, you can change them. For example, if you have two CD players and you don't have a tape deck or an MD deck, you can assign the TAPE/MD button to your second CD player.

Note that the settings of the TUNER and PHONO buttons cannot be changed.



1 Hold down the SYSTEM CONTROL/FUNCTION button whose function you want to change (TAPE/MD, for example).

2 Press the corresponding numeric button of the component you want to assign to the SYSTEM CONTROL/FUNCTION button (1 - CD player, for example).

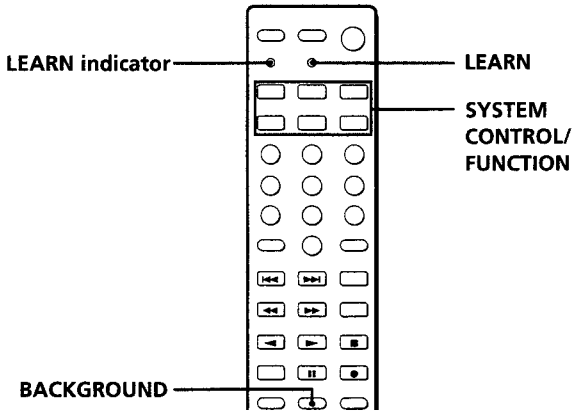
For the numeric buttons, see the table in "Operating one component while using another" on page 10.
Now you can use the TAPE/MD button to control a second CD player.

To reset the setting to the factory setting
Repeat the above procedure.

Programming the Remote (STR-DE515/DE415 only)

The RM-P301 remote can control non-Sony components by "learning" the control signals from their remotes. Once this remote learns the other components signals, you can use these components as part of your system. Additionally, if you have any Sony components that fail to operate with this remote, use this programming function. This remote can "learn" signals only from other infrared wireless remotes. Before you programme signals, make sure that the two remotes:

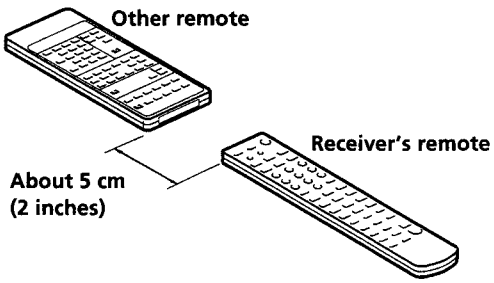
- Face straight at each other (see Step 3 below)
- Are placed at a distance of about 2 inches (5 cm)
- Are not moved during programming



1 Press the SYSTEM CONTROL/FUNCTION button of the component you want to programme. For example, if you want to programme a CD player's remote, press CD.

2 Press LEARN to turn on the LEARN indicator.

3 Press the button on this unit's remote that is to "learn" the signal from the other remote.
The LEARN indicator flashes slowly.
For the buttons you can use, see "Remote Button Descriptions" on page 26 for the buttons you can use to operate each component.



If the LEARN indicator flashes rapidly
You cannot use the button you've pressed.

(continued)

4 On the other remote, select the function that the receiver's remote is to "learn" and hold down its button until the LEARN indicator lights steadily.

5 Repeat Steps 3 and 4 to programme other buttons. Note that each button can only "learn" one signal from another remote.

6 Press LEARN.
After the LEARN indicator turns off, you can control the other component with the programmed buttons.

When you programme the recording signal
While holding down the ● button on the receiver's remote and press the record button on the other remote.

If you cannot successfully programme signals, check the following:
- If the LEARN indicator does not light up at all, the batteries are weak. Replace both batteries.
- If the LEARN indicator does not flash or light up in Step 3 or 4, there is interference. Clear the signal as described in "Clearing the programmed signal" below and programme again from the beginning.
- The two remotes are placed too far apart. Make sure they are only 5 cm (2 inches) apart.
- If you don't proceed to the following steps within about 1 minute during Steps 2 and 3, the remote automatically exits learning mode. Start again from Step 2.
- If the memory in the remote has become full, (If you programme signals of Sony components, you can store about 30 signals.) you can programme a new signal on a previously programmed button, but the new signal will replace the previously programmed one.

Notes
- You cannot turn on programmed components by pressing a SYSTEM CONTROL/FUNCTION button. You have to turn on the component's power switch.
- Do not programme remote signals of air conditioners or other household appliances.

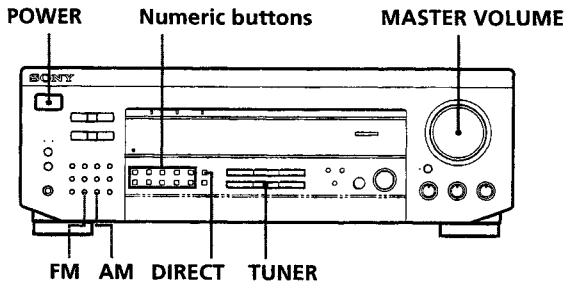
Clearing the programmed signal

To clear the programmed signals, do the following:
Hold down SYSTEM-OFF, VISUAL POWER and VOL- keys together, LED will blink 3 times. This indicates that the remote is initialize to factory-preset.
The button's functions are reset to the factory-preset.

Receiving Broadcasts

This receiver lets you enter a station's frequency directly by using the numeric buttons (direct tuning). If you don't know the frequency of the station you want, see "Receiving broadcasts by scanning stations (automatic tuning)" on page 13.

Before you begin, make sure you have:
- Connected an FM/AM aerial to the receiver as indicated on page 5.
- Selected the appropriate speaker system. (See "Selecting the speaker system" on page 7.)



1 Press POWER to turn on the receiver.

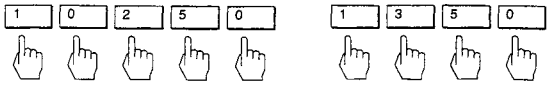
2 Press TUNER.
The last received station is tuned in.

3 Press FM or AM to select FM or AM stations.

4 Press DIRECT.

5 Press the numeric buttons to enter the frequency.

Example 1: FM 102.50 MHz **Example 2: AM 1350 kHz**



6 When you tune in AM stations, adjust the direction of the AM loop aerial for optimum reception.

To receive other stations
Repeat Steps 3 to 5.

If the STEREO indicator remains off
Press FM MODE when an FM stereo broadcast is received.

If an FM stereo programme is distorted
The STEREO indicator flashes. Press FM MODE to change to monaural (MONO). You will not have the stereo effect but the distortion will be reduced. To return to stereo mode, press this button again.

If you cannot tune in a station and the entered numbers are flashing
Make sure you've entered the right frequency. If not, press DIRECT and re-enter the frequency you want. If the entered numbers still flash, the frequency is not used in your area.

To watch FM simulcast TV programmes
Make sure that you tune in the simulcast programme both on the TV (or the VCR) and on the receiver.

If you enter a frequency not covered by the tuning interval
The entered value is automatically rounded up or down to the closest covered value.

Tuning intervals for direct tuning are:
FM: 50 kHz intervals
AM: 9 kHz intervals

Receiving broadcasts by scanning stations (automatic tuning)

If you don't know the frequency of the radio station you want, you can have the receiver scan all the receivable stations to locate the one you want.

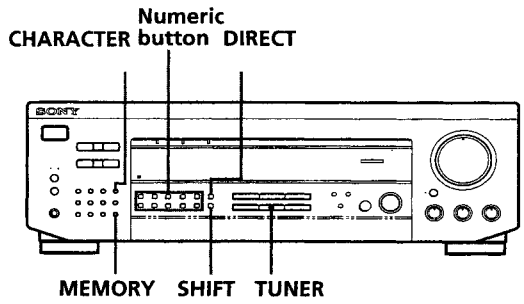
1 Press TUNER.
The last received station is tuned in.

2 Press FM or AM to select FM or AM.

3 Press TUNING/CHARACTER + or –.
Press the + button for a higher station number; press the – button for a lower one. When you tune past either end of the band, the receiver automatically jumps to the opposite end. Every time a station is received, the receiver stops scanning. To continue scanning, press the button again.

Presetting Radio Stations

You'll most likely want to preset the receiver with the radio stations you listen to often so that you don't have to tune in the station every time. The receiver can store a total of 30 FM or AM stations. You can store the stations on preset numbers combining 3 characters (A, B, C) and numbers (0 - 9). For example, you can store a station as preset number A1, B6 or C9, etc.



1 Press TUNER.
The last received station is tuned in.

2 Tune in the station you want.
If you are not familiar with how to tune in a station, see "Receiving Broadcasts" on the previous page.

3 Press MEMORY.
"MEMORY" appears for a few seconds.
Do steps 4 and 5 before "MEMORY" goes out.

4 Press SHIFT to select a character (A, B or C).
Each time you press SHIFT, the letter "A," "B" or "C" appears in the display.

If "MEMORY" disappears, start again from step 3.

5 While MEMORY is displayed, press the number you want to use (0 to 9).

6 Repeat Steps 2 to 5 to preset other stations.

To change a preset station
Preset a new station on the number you want to change.

Note
If the mains lead is disconnected for about one week, the preset stations will be cleared from the receiver's memory, and you will have to preset the stations again.

(continued)

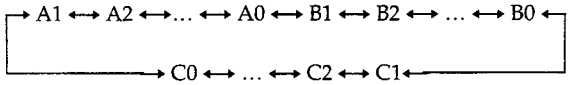
Tuning preset stations (preset tuning)

You can tune directly to a preset station by entering its preset number. If you don't know which stations are preset on which numbers, you can tune by scanning the preset stations.

1 Press TUNER.
The last received station is tuned in.

2 Press SHIFT to select a character (A, B or C), then press the number.
For example, select A and then press 7 to tune in the station preset as A7.

You can tune by scanning the preset stations
First press TUNER and then press PRESET TUNING + or – to select the station you want. Each time you press the buttons, the preset numbers change as follows:



Naming preset stations

You can store names, up to 8 characters long, for your preset stations (except for FM RDS stations). Once you name a preset station, the name appears in the display instead of the frequency when you tune to that preset. The characters you can use include letters, numbers and symbols.

1 Tune to the preset station you want to name

2 Press CHARACTER.
The cursor blinks in the display.

3 Use TUNING/CHARACTER + or – to select the character you desire.

4 Press CHARACTER to move the cursor into position for the next character.

5 Repeat steps 3 and 4 to enter up to 8 characters.

6 Wait a few seconds and the receiver automatically stores the name at the previously selected preset.

If you make a mistake
Press CHARACTER repeatedly so that the character you want to change blinks in the display, then use TUNING/CHARACTER + or – to select the desired character.

Using the Radio Data System (RDS)

What you can do with the Radio Data System

Radio Data System (RDS) is a broadcasting service that allows radio stations to send additional information along with the regular radio programme signal. This receiver offers you three convenient RDS features: Displaying the RDS information; Monitoring of traffic, news, or information programmes; and Locating a station by programme type. RDS is available only on FM stations.*

Note
RDS may not work properly if the station you are tuned to is not transmitting the RDS signal properly or if the signal strength is weak.

* Not all FM stations provide RDS service, nor do they provide the same types of services. If you are not familiar with the RDS system, check with your local radio stations for details on RDS services in your area.

Receiving RDS broadcasts

Simply select a station from the FM band.
When you tune in a station that provides RDS services, the station name appears in the display.

Displaying the RDS Information

Press DISPLAY. Each time you press DISPLAY, the display advances one step through the following information.

Information displayed	You can:
Station Name**	Locate each station by name (e.g., WDR) instead of frequency.
Frequency**	Locate each station by frequency
Programme Type	Locate a specific type of programme being broadcast. (See page 16 for the types of programmes you can select.)
Radio Text	Display the text messages sent by the RDS station.
Clock (24-hour system)	Display the current time

**This information also appears for non-RDS FM stations.

Notes

- If there is an emergency announcement by governmental authorities, ALARM flashes in the display.
- When the message consists of 9 characters or more, the message scrolls across the display.
- The following messages appear if a station is not providing a particular RDS service:
  "NO PTY" (the selected programme type is not available)
  "NO TEXT" (text data is not available)
  "NO TIME" (clock time data is not available)

Monitoring traffic, news, or information programmes (EON)

Enhanced Other Networks (EON) allows the tuner to automatically switch to a station broadcasting traffic, news, or other information. After the programme ends, the tuner switches back to the station you were listening to (or the function you were using).

1 Tune to an FM station.

2 Press EON to select the programme you want to monitor.
Each time you press EON, the indicators light as follows:

TA (Traffic Announcement)
↓
NEWS
↓
INFO (information)
↓
OFF

The receiver enters EON standby mode.
"NO TA", "NO NEWS", or "NO INFO", appears if you press EON before tuning to an RDS station.

When a station starts broadcasting the programme you selected, the receiver switches to the station, a message (e.g., "NOW TA") appears and the respective indicator (e.g.,"TA") flashes. After the programme ends, the receiver switches back to the station you were listening to (or the function you were using).

To stop monitoring the programme
Press EON once.

Turn off the EON feature when you want to record a programme without interruptions, especially when you want to do timer recording.

Notes

- To use this function, be sure to store the RDS stations beforehand.
- When the selected station has a weak signal, "WEAK SIG" appears and then, the receiver returns to the previous station or programme source.

Locating a station by programme type (PTY)

You can locate a station you want by selecting a programme type. The receiver tunes in the type of programmes currently being broadcast from the RDS stations stored in the receiver's preset memory.

1 Press PTY repeatedly until the programme type you want appears in the display.
See the following table for the programme types you can select.

2 Press PRESET TUNING + or – while the programme type appears in the display.
The tuner starts searching the preset RDS stations for the programme ("Search" and the programme type are displayed alternately).
When the receiver finds the programme you are looking for, it stops searching. The preset number of the preset station currently broadcasting the selected programme type flashes, and the receiver receives the station.

Note

"NO PTY" appears when the programme type that you've selected is not being broadcast and the receiver returns to the original station.

(continued)

You can select the following programme types:

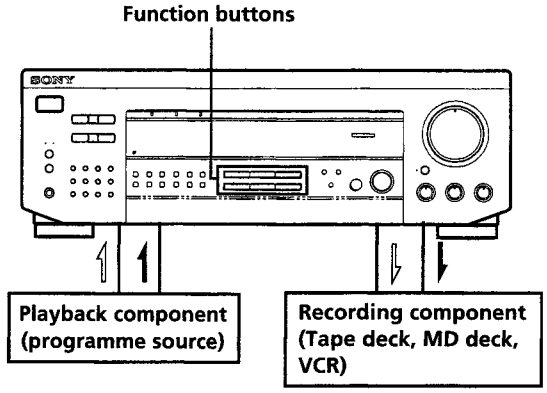
Programme type	What you hear
NONE	Any programmes not defined below
NEWS	News programmes
AFFAIRS	Topical programmes that expand on current news
INFO	Programmes about consumer affairs, medical advice, and weather
SPORT	Sports programmes
EDUCATE	Educational programmes, such as a "how-to" programme and advice
DRAMA	Radio plays and serials
CULTURE	Programmes about national or regional culture, such as religion, language, and societal concerns
SCIENCE	Programmes about the natural sciences
VARIED	Programmes containing celebrity interviews, panel games, and comedy
POP M	Popular music programmes
ROCK M	Rock music programmes
M.O.R.M	Easy Listening (middle of the road music)
LIGHT M	Classical music, such as instrumental, vocal, and choral
CLASSICS	Performances of major orchestras, chamber music, opera, etc.
OTHER M	Music that does not fit into any of the above categories, such as jazz and rhythm and blues
ALARM	Emergency announcements

Note

If there is an emergency announcement by governmental authorities, ALARM flashes in the display.

Recording

This receiver makes it easy to record to and from the components connected to the receiver. You don't have to connect playback and recording components directly: once you select a programme source on the receiver, you can record and edit as you normally would using the controls on each component.
Before you begin, make sure you've connected all components properly.


Function buttons
Playback component (programme source)
Recording component (Tape deck, MD deck, VCR)
: Audio signal flow
: Video signal flow

Recording on an audio tape or MiniDisc

You can record on a cassette tape or MiniDisc using the receiver. See the instruction manual of your tape deck or MD deck if you need help.

1 Press one of the function buttons to select the programme source.

2 Set the component to be ready for playing.
For example, insert a CD into the CD player.

3 Insert a blank tape or disc into the recording deck and adjust the recording level, if necessary.

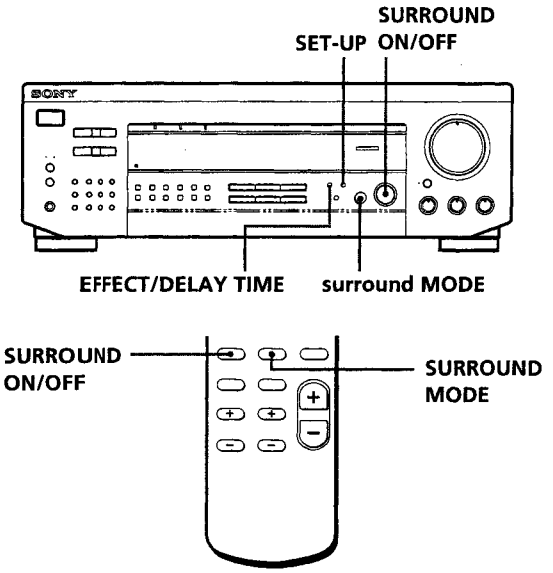
4 Start recording on the recording deck and then start playing the component.

Note

No REC OUT signal is available in 5.1/DVD mode.

Choosing a Surround Mode

You can take advantage of surround sound simply by selecting one of the three pre-programmed surround modes according to the type of music you wish to play.



1 Press SURROUND ON/OFF to turn on the surround sound.
One of the SUR (surround) MODE indicators lights up in the display.

2 Press surround MODE repeatedly until the indicator for the surround mode you want lights up.
Select the appropriate surround mode as follows:

Select	To
PRO LOGIC*	Decode programmes processed with Dolby Surround and create the atmosphere of a movie theatre.
C. STUDIO	Add the acoustic reflections of a cinema studio to decoded Dolby Surround signals.
HALL	Reproduce the acoustics of a rectangular concert hall. Ideal for soft, acoustic sounds.

* "DOLBY" appears in the display.

When you use the remote
Each time you press surround MODE, surround mode changes as follows:
STR-DE515 only

→ PRO LOGIC* → C.STUDIO A → C.STUDIO B →
LARGE HALL** ← SMALL HALL** ←

STR-DE415/DE315

→ PRO LOGIC* → C.STUDIO → HALL →

* "DOLBY" appears in the display.
** "S.HALL" and "L.HALL" in the display.

To turn off surround sound
Press SURROUND ON/OFF.

You can find Dolby Surround-encoded software by looking at the packaging
However, some videos and laser discs may use Dolby Surround sound even if it's not indicated on the package.

Note
Make sure to select speaker A with the SPEAKERS A button, otherwise, you can't obtain the surround effect.

Adjusting the Effect Level (for C.STUDIO and HALL only)

You can make the surround sound more prominent by increasing the EFFECT level. This control lets you adjust the "presence" of the surround effect in six steps (1-6).

1 Start playing a programme source.

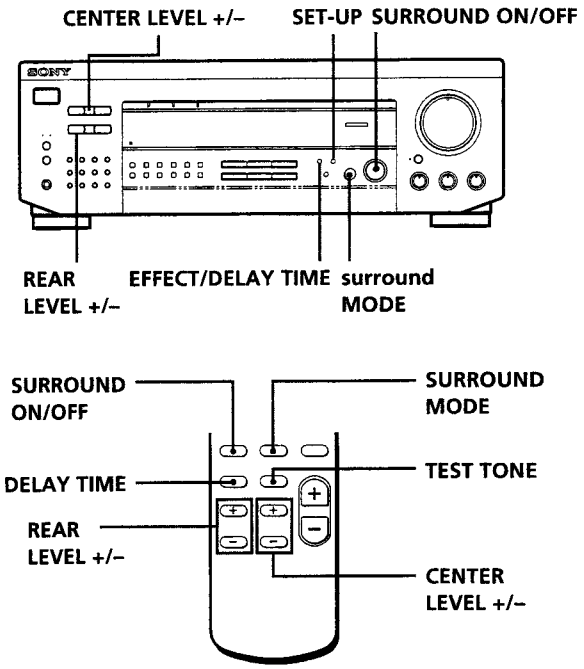
2 Press EFFECT/DELAY TIME to select the level you prefer. The effect level ("EFFECT 1" ... "EFFECT 6") appears on the display.

Note
Changing the effect level may not produce major variations in the surround effect when used with certain playback sources.

Getting the Most Out of Dolby Pro Logic Surround Sound

To obtain the best possible Dolby Pro Logic Surround sound, first select the centre mode according to the speaker system you have. Then, adjust each speaker volume and delay time.

Note that you must have at least one additional pair of speakers and/or one centre speaker to do the following adjustments.



Selecting the centre mode

The receiver offers you four centre modes: Phantom, 3 Channel Logic, Normal, and Wide. Each mode is designed for a different speaker configuration. Select the mode that best suits your speaker's system configuration:

1 Press SURROUND ON/OFF to turn on surround sound.

2 Press Surround MODE repeatedly to select the Dolby surround sound field (PRO LOGIC or C.STUDIO mode).

3 Press SET-UP repeatedly until the centre mode you want appears in the display. Select the centre mode as follows:

If you have	Select	So that
Front and rear speakers, no centre speaker	PHANTOM	The sound of the centre channel is output from the front speakers.
Front and centre speakers, no rear speaker	3 CH LOGIC (3 Channel Logic)	The sound of the rear channel is output from the front speakers.
Front and rear speakers, and a small centre speaker	NORMAL	The bass sound of the centre channel is output from the front speakers (because a small speaker cannot produce enough bass).
Front and rear speakers, and a large centre speaker	WIDE	For "complete" Dolby Pro Logic Surround sound.

(continued)

Adjusting the speaker volume

The test tone feature lets you set the volume of your speakers to the same level. (If all of your speakers have equal performance, you don't have to adjust the speaker volume.)

Using the controls on the remote lets you adjust the volume level from your listening position.

1 Press TEST TONE on the remote.
You will hear the test tone from each speaker sequentially.

2 Adjust the volume level so that the test tone from each speaker is at the same level from your listening position.
- To adjust the level of centre speaker, press CENTER LEVEL + or – on the remote.
- To adjust the level of rear speakers, press REAR LEVEL + or – on the remote.

3 Press TEST TONE on the remote to turn off the test tone.

You can adjust all speakers at one time
Adjust MASTER VOL on the remote or MASTER VOLUME on the receiver.

You can also adjust the volume level with the controls on the receiver
After pressing TEST TONE on the remote, press REAR LEVEL + or – and CENTER LEVEL + or – to adjust the level of the rear and centre speakers respectively.

You can increase the output level of the rear speakers
The adjustment range of the rear speakers is preset from –15 to +10, but you can shift the range up 5 levels (–10 to +15). Hold down MODE on the receiver while turning on the power until "GAIN UP" appears on the display.
The values for the rear level remain fixed at –15 to +10 in the display, but you will be able to hear the difference in the actual output level.

To reset the rear level adjustment range, repeat this procedure to display "NORMAL".

Adjusting the delay time

You can make the surround sound more effective by delaying the output from the rear speakers (delay time). You can select from three delay times, S (15 mS), M (20 mS), and L (30 mS). For example, if you've placed the rear speakers in a large room or apart from your listening position, set the delay time shorter.

1 Start playing a programme source encoded with Dolby Surround sound.

2 Press DELAY TIME on the remote or EFFECT/DELAY TIME on the receiver repeatedly to choose the delay time parameter. The current delay time appears in the display, such as "DELAY S," "DELAY M" or "DELAY L."

Note
Select the PRO LOGIC mode when you adjust the delay time using EFFECT/DELAY TIME on the receiver.

Troubleshooting

If you experience any of the following difficulties while using the receiver, use this troubleshooting guide to help you remedy the problem. Should any problem persist, consult your nearest Sony dealer.

There's no sound or only a very low-level sound is heard.

- ➡ Check that the speakers and components are connected securely.
- ➡ Make sure you select the correct component on the receiver.
- ➡ Make sure you set the SPEAKERS selector correctly.
- ➡ Press MUTING on the remote if "MUTING" is displayed.
- ➡ The protective device on the receiver has been activated because of a short circuit. ("PROTECT" flashes.) Turn off the receiver, eliminate the short-circuit problem and turn on the power again.

The left and right sounds are unbalanced or reversed.

- ➡ Check that the speakers and components are connected correctly and securely.
- ➡ Adjust the BALANCE control.

Severe hum or noise is heard.

- ➡ Check that the speakers and components are connected securely.
- ➡ Check that the connecting cords are away from a transformer or motor, and at least 10 feet (3 meters) away from a TV set or fluorescent light.
- ➡ Place your TV away from the audio components.
- ➡ Make sure you connect a ground wire to the aerial ground terminal.
- ➡ The plugs and jacks are dirty. Wipe them with a cloth slightly moistened with alcohol.

RDS isn't working.

- ➡ Make sure you're tuning an FM station.
- ➡ Select a stronger FM station.

The appropriate display or information does not appear.

- ➡ Contact the radio station and find out whether or not they actually provide the service in question. If so, the service maw be temporarily out of service.

The station, or programme source, was interrupted by another station / the tuner automatically starts searching stations.

- ➡ The EON function is working. Turn off EON when you don't want the current programme interrupted.

The station name does not appear in the display.

- ➡ Press DISPLAY until the station name appears.

Radio stations cannot be tuned in.

- ➡ Check that the aerials are connected securely. Adjust the aerials and connect an outdoor aerial if necessary.
- ➡ The signal strength of the stations is too weak (when you tune in with automatic tuning). Use direct tuning.
- ➡ No stations have been preset or the preset stations have been cleared (when you tune in with scanning preset stations). Preset the stations (see page 13).

No sound or only a very low-level sound is heard from the rear speakers.

- ➡ Select the appropriate centre mode (see page 18).
- ➡ Adjust the speaker volume appropriately (see page 19).
- ➡ Make sure you turn on the sound field surround mode function.

No sound is heard from the centre speaker.

- ➡ Select the appropriate centre mode (see page 18).
- ➡ Adjust the speaker volume appropriately (see page 19).

Surround effect cannot be obtained.

- ➡ Make sure you turn on the sound field function.
- ➡ Make sure that the front speakers are connected to the SPEAKERS A terminal.
- ➡ Make sure that SPEAKERS A and B buttons are depressed when two sets of front speakers are used.

Recording cannot be made.

- ➡ Check that the components are connected correctly.

The remote does not function.

- ➡ Point the remote at the remote sensor ■ on the receiver.
- ➡ Remove the obstacles in the path of the remote and the receiver.
- ➡ Replace both batteries in the remote with new ones if they are weak.
- ➡ Make sure you select the correct function on the remote.
- ➡ Pressing TV CONTROL sets the remote to operate the TV only. In this case, press one of the SYSTEM CONTROL/FUNCTION buttons before operating the receiver (etc.).

Specifications

Amplifier section

Power output

Stereo mode (DIN 1 kHz, 4 ohms)
STR-DE515:
110 W + 110 W
STR-DE415:
80 W + 80 W
STR-DE315:
80 W + 80 W

Surround mode (DIN 1 kHz, 4 ohms)
Front:
STR-DE515: 90 W/ch
STR-DE415: 70 W/ch
STR-DE315: 60 W/ch
Centre:
STR-DE515: 90 W
STR-DE415: 70 W
STR-DE315: 60 W
(only in PROLOG MODE)
Rear:
STR-DE515:
(DIN 1 KHz, 8 ohms)
30 W/ch
STR-DE415:
(DIN 1 KHz, 4 ohms)
70 W
STR-DE315:
(DIN 1KHz, 4 ohms)
60 W

Frequency response PHONO: RIAA equalization curve ±0.5 dB
TV/LD, CD, TAPE/MD, VIDEO, 5.1/DVD*:
10 Hz - 50 kHz ±1 dB

Inputs

	Sensitivity	Impedance	S/N (weighting network, input level)
PHONO (MM)	2.5 mV	50 kilohms	74 dB 72 dB*** (A, 2.5 mV)
CD, 5.1/DVD*	200 mV	50 kilohms	82 dB 82 dB*** (A, 150 mV)
TAPE/MD, TV/LD, VIDEO	150 mV		

*** '78 IHF

Outputs TAPE/MD REC OUT:
Voltage: 150 mV,
Impedance: 10 kilohms
VIDEO AUDIO OUT:
Voltage: 150 mV,
Impedance: 10 kilohms
WOOFER*/MIX AUDIO OUT**
Voltage: 2 V
Impedance: 10 kilohms
PHONES: Accepts low and high impedance headphones

Muting Full mute

BASS BOOST +10 dB at 70 Hz

TONE ±8 dB at 100 Hz and 10 kHz

FM tuner section

Tuning range 87.5 - 108.0 MHz

Aerial terminals 75 ohms, unbalanced

Sensitivity Mono: 18.3 dBf, 2.2 µV /75 ohms
Stereo: 38.3 dBf, 22.5 µV /75 ohms

Usable sensitivity 11.2 dBf, 1 µV /75 ohms (IHF)

S/N Mono: 76 dB
Stereo: 70 dB

Harmonic distortion at 1 kHz Mono: 0.3 %
Stereo: 0.5 %

Separation 45 dB at 1 kHz

Frequency response 30 Hz - 15 kHz $^{+0.5}_{-2}$ dB

Selectivity 60 dB at 400 kHz

AM tuner section

Tuning range 522 - 1611 kHz

Aerial Loop aerial

Usable sensitivity 50 dB/m (at 999 kHz)

S/N 54 dB (at 50 mV/m)

Harmonic distortion 0.5 % (50 mV/m, 400 Hz)

Selectivity 35 dB

General

System Tuner section: PLL quartz-locked digital synthesizer system
Preamplifier section: Low-noise NF type equalizer
Power amplifier section: Pure-complimentary SEPP

Power requirements 230 V AC, 50/60 Hz

Power consumption STR-DE515: 230 W
STR-DE415: 175 W
STR-DE315: 175 W

AC outlets Switched 100 W (except for the U.K. model)

Dimensions 430 x 145 x 295 mm

Mass (Approx.) STR-DE515:
7.2 kg
STR-DE415/315:
6.4 kg

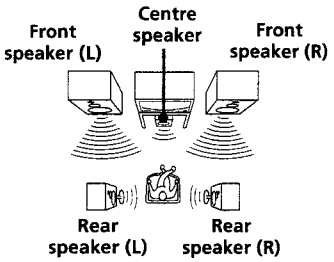
Supplied accessories FM wire aerial (1)
AM loop aerial (1)
Remote controller (remote) (1)
Size AA (R6) batteries (2)
Scart adaptor (1)

*5.1/DVD for STR-DE515 only.
**MIX AUDIO OUT for STR-DE415 only.
Design and specifications are subject to change without notice.

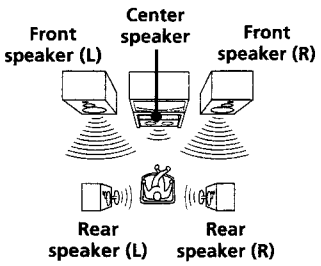
Glossary

Centre mode
Setting of speakers to enhance Dolby Pro Logic Surround mode. To obtain the best possible surround sound, select one of the following four centre modes according to your speaker system.

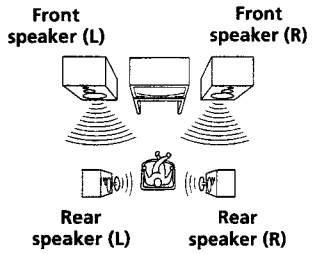
- **NORMAL mode**
  Select NORMAL mode if you have front and rear speakers and a small centre speaker. Since a small speaker cannot produce enough bass, the bass sound of the centre channel is output from the front speakers.



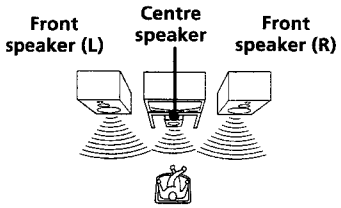
- **WIDE mode**
  Select WIDE mode if you have front and rear speakers and a large centre speaker. With the WIDE mode, you can take full advantage of Dolby Surround sound.



- **PHANTOM mode**
  Select PHANTOM mode if you have front and rear speakers but no centre speaker. The sound of the centre channel is output from the front speakers.



- **3 CH LOGIC mode**
  Select 3 CH LOGIC mode if you have front and centre speakers but no rear speaker. The sound of the rear channel is output from the front speakers to let you experience some of the surround sound without using rear speakers.



Delay time
Time lag between the surround sound output from front speakers and rear speakers. By adjusting the delay time of the rear speakers, you can obtain the feeling of presence. Make the delay time longer when you have placed the rear speakers in a small room or close to your listening position, and make it shorter when you have placed them in a large room or apart from your listening position.

Direct tuning
Tuning method to let you directly enter a station's frequency using the numeric buttons. Use this method if you know the frequency of the station you want.

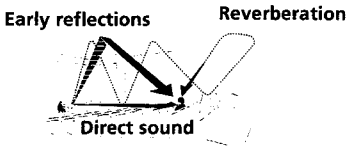
Dolby Pro Logic Surround
Decoding system of Dolby Surround sound standardized in TV programmes and movies. Compared with the former Dolby Surround system, Dolby Pro Logic Surround improves sound image by using four separate channels: off-screen audio effects, on-screen dialog, left-to-right panning, and music. These channels manipulate the sound to be heard and enhance the action as it happens on the screen. To take advantage of Dolby Pro Logic, you should have at least one pair of rear speakers and/or one centre speaker. You also need to select the appropriate centre mode to enjoy a full effect.

5.1 INPUT
Jacks used to input the audio signals that are decoded from the Dolby Digital AC-3 format audio. The jacks are usually connected with an AC-3 decoder or a DVD player equipped with an AC-3 decoder. This connection enables the amplifier to reproduce 5.1 channel surround sounds.

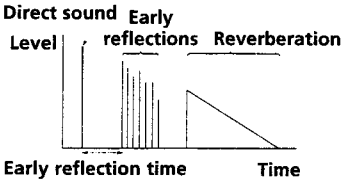
Preset station
A radio broadcasting station that is stored in memory of the receiver. Once you "preset" stations, you no longer have to tune in the stations. Each preset station is assigned its own preset number, which lets you tune them in quickly.

Surround sound
Sound that consists of three elements: direct sound, early reflected sound (early reflections) and reverberative sound (reverberation). The acoustics where you hear the sound affect the way these three sound elements are heard. These sound elements are combined in such a way that you can actually feel the size and the type of a concert hall.

- **Types of sound**

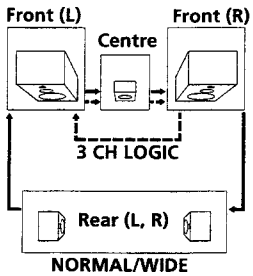


- **Transition of sound from rear speakers**

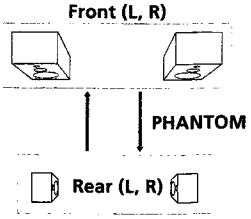


Test tone
Signal given out by the receiver for adjusting the speaker volume. The test tone will come out as follows:

- **In a system with a centre speaker (NORMAL/WIDE/3 CH LOGIC modes)**
  The test tone is output from the front L (left), centre, front R (right), and rear speakers in succession.



- **In a system without a centre speaker (PHANTOM mode)**
  The test tone is output from the front and the rear speakers alternately.



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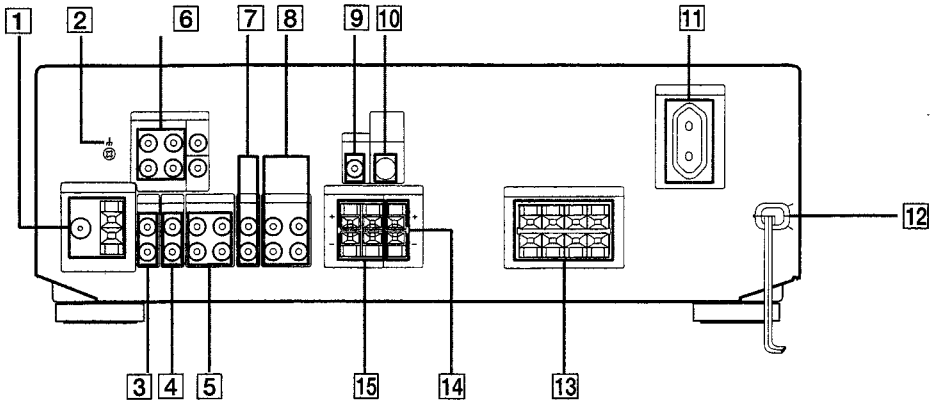


1 ANTENNA (AM/FM)
2 ⏚ ground terminal
3 PHONO
4 CD
5 TAPE/MD
6 5.1/DVD (STR-DE515 only)
7 TV/LD
8 VIDEO
9 MIX AUDIO OUT (STR-DE415) WOOFER (STR-DE515)
10 WIRELESS REAR SPEAKER (STR-DE515 only)
11 SWITCHED AC OUTLET (Except for the U.K model)
12 Mains lead
13 FRONT SPEAKERS (A/B)
14 SURROUND SPEAKER (CENTER)
15 SURROUND SPEAKERS (REAR)

Remote Button Descriptions

For buttons not described on previous pages and buttons with names different from the buttons on the main unit.

Remote Button	Operates	Function
0-9	Receiver	Selects preset numbers.
	CD player/MD deck/DVD player	Selects track numbers. 0 selects track 10.
	TV/VCR	Selects channel numbers.
>10	CD player/ Tape deck/ MD deck	Selects track numbers over 10.
CH/PRESET +/–	Receiver	Scans and selects preset stations.
	TV/VCR/LD	Selects preset channels.
D. SKIP	CD player	Skips discs (CD player with multi-disc changer only.)
DISC	CD player	Select discs (Mega storage CD player only
◀◀/▶▶	CD player/ DVD player	Searches tracks (forward or backward).
	Tape deck/MD deck/VCR	Fastforwards or rewinds.
⏮/⏭	CD player/ MD deck	Skips tracks.
⏸	CD player/ Tape deck/MD deck/VCR/ DVD player	Pauses play or record. (Also starts recording with components in record standby.)
▶	CD player/ Tape deck/MD deck/VCR/ DVD player	Starts play.
■	CD player/ Tape deck/MD deck/VCR	Stops play.
◀	Tape deck	Starts play on the reverse side.
●	Tape deck	Sets tape decks to the record standby mode.
● + ▶	Tape deck/ MD deck/ VCR	Starts recording when pressed with ▶ (or ◀ on tape deck).
RMS DIRECTION	Tape deck	Selects tape direction (for tape decks with the RMS* function.)
RMS CLEAR	Tape deck	Clears RMS* programme (for tape decks with the RMS* function.)
RMS/START	Tape deck	Programmes tracks (tape deck with the RMS* function only).
ENTER	TV/VCR/CD	Changes channels when used with 0-9.
TV/VIDEO	TV/VCR	Selects input signal: TV input or video input.
VISUAL POWER	TV/VCR/ LD player/ DVD player	Turns on or off the power.
TV CONTROL	TV	Turns on the TV, switches the input to "TV," and sets the remote to operate the TV.
-/- -	TV	Selects the channel entry mode, either one or two digit.
SUB CH +/–	TV	Selects preset channels for the small picture.**
POSITION	TV	Changes the position of the small picture.**
SWAP	TV	Swaps the small and the large picture.**
P IN P	TV	Activates the picture-in-picture function.**
JUMP	TV	Jumps back and forth between the previous and current channels.
MASTER VOL +/–	TV	Normally, adjusts the master volume of the receiver. If TV CONTROL was pressed, it adjusts the volume on the TV.
MUTING	TV	Normally, mutes the sound from the receiver. If TV CONTROL was pressed, the sound on the TV itself is muted.
ANT TV/VTR	VCR	Selects output signal from the aerial terminal: TV signal or VCR programme.

* RMS: Random Music Sensor

** Only for Sony TVs with the picture-in-picture function

Note

Some Sony equipment can not be controlled by this remote as shown in the table above.

Receiving Broadcasts (direct tuning)

Example: Receiving FM 102.50 MHz

TUNER

↓

FM

Select FM.

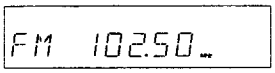
↓

DIRECT

↓

1 0 2 5 0

Display



Presetting Radio Stations

Example: Presetting a station as A7

TUNER

↓

Tune in the station you want.

↓

MEMORY

↓

SHIFT

Select A.

↓

7

Selecting a Component

Example 1: Playing a CD

CD

↓

Turn on the CD player.

↓

Start playing.

Example 2: Watching a video tape

VIDEO

↓

Turn on the VCR.

↓

Start playing.

Scanning Radio Stations (automatic tuning)

Example: Scanning FM stations

TUNER

↓

FM

Select FM.

↓

TUNING/
– CHARACTER +

↓

To continue scanning.

TUNING/
– CHARACTER +

Receiving Preset Stations

Example: Receiving the station number A7

TUNER

↓

SHIFT

Select A.

↓

7

Scanning Preset Stations

TUNER

↓

– PRESET TUNING +

Using Pre-programmed Sound Fields

Example: Watching the laser disc of a Dolby Surround-encoded movie

TV/LD

↓

SURROUND
ON/OFF

↓

SURROUND
MODE

Select PRO LOGIC.

↓

Turn on the LD player.

↓

Start playing.